

THE
AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

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THE AMERICAN PRACTITIONER.

SEPTEMBER, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

II. COMMON CARRIERS AS THE PORTERS OF DISEASE.

BY ELY M'CLELLAN, M. D.,
Assistant Surgeon U. S. A.

In a former paper* we attempted to demonstrate that railway lines were active agents in the dissemination of infectious diseases. The remarks in that paper referred chiefly to the transportation of individuals; but the same class of common carriers may become the porters of the latent germs of disease, which, being unwittingly transported from a distance, at their destination an appropriate nidus being found, a focus of disease is established. At the recent International Sanitary Conference it was unanimously affirmed that "cholera can be propagated by articles coming from an infected place which have been used by, and particularly which have belonged to, persons affected with cholera."

This opinion is based upon facts too absolute and numerous to admit of any other solution, and it may not be inappropriate to again refer to the experiments of Macnamara. This

* See August number of this journal.

observer took a quantity of fresh cholera dejections and mixed them with sand, which was then allowed to dry rapidly under a hot sun; the dried sand was then hermetically inclosed and placed in a secure position. After a lapse of seven years, during which time the vessel was undisturbed, a small quantity of this stuff was mixed with water and exposed to the sun, "*when it could not be distinguished from a fresh cholera stool.*"

De Boismont, in "The Analysis of the History of the Epidemic of Cholera in Poland in 1832," notes that many cases of cholera occurred among the Polish troops, who had worn the equipments of Russians captured in battle, cholera being at the time an epidemic in the Russian army; and Sir James Y. Simpson related the case of a young lady who, in 1832, was attacked with cholera after wearing a cap which had been worn by her aunt, who had died of the disease nearly a year before. This cap, until the day on which this young lady had worn it in sport, had never been taken from the box in which it was placed at its owner's death.

Similar instances might be narrated; but the fact that fabrics do become infected with contagious diseases is too well established to be controverted, and our attention should be directed to the agency which common carriers may exert, through such localization of infections, in the development of disease in healthy districts.

A man may die of cholera at a distance from his home. His attendants, being convinced of the non-contagiousness of the disease, pack into his trunk all his belongings and commit them to the care of a transportation company to be conveyed to his home. This home may be hundreds of miles away from any infected point, yet upon the arrival of that trunk, and upon the distribution of the articles therein contained, an outbreak of the disease results; and the observers, failing to detect the origin of the outbreak, announce *another development of cholera from local causes.*

In 1854 cholera was developed in the village of Ridgmont, county of Bedford, England, from a bundle of clothing of a man who had died of the disease in the city of London; and in the county, which had been free from the disease prior to the arrival of these articles of clothing, eleven fatal cases occurred.

In 1865 the post-office in the city of Marseilles, France, became infected with cholera, and, strangely enough, the disease was confined to the clerks who opened the mails from Alexandria, Egypt, the latter being an infected port.

In 1848 the ship *New York* left Havre, on the 9th day of November, with a large number of German emigrants, who were leaving an infected district. Fifteen days out from Havre the weather became very cold, and chests and trunks were opened for thicker clothing. Among others the clothing of a person who had died of cholera at his home was used by his brother, now on board of the *New York*. The next day this man was taken with cholera, and by the 26th of November five persons had died of the disease on shipboard, and twelve others were landed sick at the New York quarantine. This instance was almost duplicated in the case of the ship *Swanton*, that had left Havre for New Orleans ten days prior to the *New York*, carrying the same class of emigrants, who upon going into warmer latitudes went to their chests for lighter clothing, these chests not having been opened since they were packed in an infected district in Germany.

In 1832 a sailor died in Europe of cholera. His chest, which contained his clothing, was packed on shipboard on the coast of Norway, and sent to the family of the sailor in a small village in the state of Maine. Upon its arrival the chest was opened and examined. In a few days all the inmates of the house were taken with cholera, and several died.

Many such instances could be related. The history of the American epidemic of 1873 contains many such instances as

striking and as well defined as those already presented. The facts are noted, and the agency of common carriers in the distribution of disease is demonstrated, although to them no shadow of blame can be attached; but the facts are strongly urged that sanitarians may be induced to inquire more closely into isolated and seemingly mysterious demonstrations of the disease, that, the cause being determined, the infection may be stamped out. Such instances of infection will occur until a sanitary surveillance is exercised by government authority in all infected districts.

The class of common carriers who next to railways are actively employed in the transportation of infectious diseases are vessels of all descriptions. It is not proposed to attempt any description of the transportation furnished diseases upon the high seas by the merchant marine or by war-vessels; the fact is patent to all observers; but a consideration of the ability possessed by the vessels of all classes that ply upon the western waters of America is earnestly asked.

Can diseases be conveyed from point to point by river-steamers, and do vessels of this class offer an asylum to contagion, which may unexpectedly be developed in unprepared communities?

The large steamboats that navigate the western waters most certainly must be held to a certain responsibility in the spread of contagious diseases. A superficial inspection will be all-sufficient to convince even the most skeptical.

These vessels, compelled from the necessity of the waters navigated to be of light draught, are built with broad, deep decks. The lower deck, which is the largest, is for the accommodation of the machinery, freight, crew, and deck-passengers; the second deck, the sides of the greater portion of which are lined with state-rooms, is for the use of cabin-passengers; and an upper deck, or "the texas," upon which is a row of state-rooms for the use of the boat's officers; the whole is surmounted by the pilot-house.

All the available space upon the lower deck is occupied during a trip by freight, which consists of merchandise of all classes. The provision-chests and ice-boxes of the boat are generally found upon this deck, and to it are confined the class known as deck-passengers and the crew. A deck-passenger is one who can not pay full fare, and in America at once indicates the individual as belonging to those classes of the community among whom infectious diseases find their most numerous victims. These persons are furnished with nothing but transportation. They sit during the day and sleep during the night in such positions as they may best secure; and this is generally found to be upon those piles of freight which will be for the longest time unmolested. In this they are but little better off than the crew, who when not at work occupy any place they may select.

It is among the deck-passengers of a river-steamer that infectious diseases, cholera especially, is conveyed from point to point. As the disease almost always occurs in a community unprepared for its advent, so it is upon these vessels. The disease may have been announced in cities or towns upon the route of the vessel, but it is not until the disease is absolutely fastened upon the boat that the officers are inclined to adopt any precautions. Thus it was in 1873. Boat after boat passed up the Mississippi and Ohio rivers from infected points, upon which cases of cholera occurred; but the existence of the disease was denied, and the sickness was attributed to green fruit and vegetables, or to cholera morbus, that useful scape-goat!

A deck-passenger taken with choleraic diarrhea uses the close and wet closet provided for his accommodation, and returns with soiled clothing to the pile of freight. The second stage of the disease occurs, and he vomits indiscriminately. The vomit and the involuntary dejections soak into the packages. The patient may advance to the stage of collapse, or the case may terminate fatally before atten-

tion is called to it. It is impossible to define to what extent articles of merchandise may become infected. Science has not yet defined the stage of the disease in which the excreta are most actively infectious, although it seems to be indicated that the excreta of cases in the stage of acute painless diarrhea and the dejections of those convalescent, or who have passed into the stage of typhoid, are absolutely more virulent in their infecting properties than those which are drenched with watery constituents; and the recent series of experiments at St. Petersburg show that the urine of individuals infected with cholera is capable of reproducing the disease.

The class of persons who are known as cabin-passengers are those whose systems are most generally in the condition to resist the invasion of the disease. The accommodations afforded them are ample for comfort. Every effort is made to secure cleanliness. The food furnished is good and well cooked. But among this class of individuals those who may have contracted the disease before starting on the journey, or who are infected with the disease at any stage of its progress, will inevitably carry the infection with them; and the articles of bed-furniture which have become soiled will when washed, the destination of the vessel being reached, affect the health not only of those who perform the work, but also that of the communities in which the workers reside. It is useless to contend that Cincinnati and other cities on the Ohio River were not in this way infected in 1873.

It is suggested as a remedy to the evils herein enumerated that, during any season in which cholera may have been declared epidemic in any portion of the United States, precautions be adopted upon all river-steamers to prevent deck-passengers and the crews of such vessels coming in contact with freight on said boats other than in the necessary handling; that a constant surveillance be kept upon the crew and deck-passengers, and every case of diarrhea promptly treated; that during any season in which cholera is epidemic

each steamer carrying passengers be compelled to add a medical man to the officers of the boat; that he be absolute in all matters of sanitary importance; and that he be provided with all medical stores that may be required for the use of the sick.

LEBANON, KY.

A CASE OF BILATERAL FACIAL PARALYSIS DUE TO DOUBLE OTITIS.

BY RICHARD C. BRANDEIS, M. D.

Among the causes which may produce paralysis of the facial nerves there is one which is peculiar to this pair; namely, the local mechanical disturbances which the nerve, may experience in its course from its origin to its exit from the cranium, owing to pathological changes which may take place in the bony canals through which it must pass.

Bérard, in an article on *Maladies de la Face* in the *Dictionnaire de Médecine*, and Deleau, in a memoir read before the French Academy of Medicine in 1857, as well as subsequent writers, have called attention to the fact that inflammation in the walls of the Fallopian canals or of the neurilemma of this portion of the facial nerve frequently produces facial paralysis. Deleau has demonstrated that inflammation of the aqueduct of Fallopius is almost always secondary to diseases of the middle ear, and that the impairment of hearing is due to the otitis, and not a sequel of the facial paralysis.

The case we are about to report is interesting, inasmuch as the paralysis was bilateral, and its course closely watched from the beginning.

John S., aged twenty years, employé of the Louisville & Nashville Railroad Company, first came to me with symptoms of pulmonary phthisis, which appeared to have made

very rapid progress, as cough had been noticed but for four or five months. I placed him in the hands of a colleague. A few days after I was called to see the patient, who complained of a sudden acute pain in the right ear, which grew more intense as night came on. He stated that he had caught a cold while his bedroom was being aired. The day after I observed paralysis of the right side of the face; the eye was wide open and staring, and could only be partially closed; the cheek was flaccid and the mouth drawn to the left side; the tongue could be moved at will, but if protruded from the mouth its tip was drawn to the left. Almost total deafness in the right ear; loud and shrill sounds caused an unpleasant sensation, and the ear was the seat of a continual pain, which occasionally became quite acute. There is a mucopurulent discharge from the meatus. The patient states that he has had occasional spells of otorrhœa for the last three years, but these have never lasted for any length of time, nor has the discharge ever been very profuse or accompanied with pain.

The patient was immediately put under an antiphlogistic course of treatment, with syringing, instillation of oil, the application of dry cups, etc.; and after ten days' continuous pain leeches were applied over the mastoid process.

At the expiration of two days I was greatly surprised to find that the symmetry of the face had been restored, but the illusion that the case had taken a favorable turn was quickly dispelled. As soon as the patient attempted to answer my questions it was manifest that the absence of symmetry was not due to the restored mobility of the facial muscles, but to a paralysis of the left side of the face, which hitherto was unaffected. The patient informs me—more by means of signs and gestures than by words, which can be articulated only with difficulty—that during the previous night he experienced very great pain in the left ear, which has been growing even more intense, and since which time the paralysis of the tongue

and difficulty of speech have set in. Hearing is now considerably impaired on the left side, and there are evidences of a purulent discharge.

The condition of the patient now remained the same for more than five weeks. The expression of both sides of the face is the same, and owing to the paralysis of the facial muscles the patient has a peculiar vacuous stare, and is as pale as a corpse. The forehead can not be wrinkled; the eyelids are wide open, and the eyeballs are rolled upward during sleep as well as when awake; the cheeks and mouth are flaccid; the nostrils immovable and only distended during the expiratory act; the lips fail to prevent the outflow of saliva as soon as the head is raised from the recumbent position. When the patient partakes of food he bends his head even more backward than before, in order to retain matter in the buccal cavity. Chewing is very difficult, and, for this reason he is fed with fluids only, which he puts back in the mouth as far as possible, and manages to swallow by bending his head backward. The expectoration of mucus is accelerated by a rapid bowing of his head.

Deglutition is also somewhat impaired. As it is accompanied by pain and the pharynx is congested, this difficulty is attributed to an extension of the inflammatory process from the tympanic cavities through the Eustachian tubes into the pharynx. But this may also be due to a paralysis of those filaments of the facial nerve, which, anastomosing with the glossa-pharyngeal, supply the pharynx, or by the impaired action of the digastric and stylo-hyoid muscles.

The mobility of the palate is unimpaired. There is no nasal voice nor any regurgitation through the nose; articulation is indistinct; the pronunciation of words unintelligible, as the lips can not act; the voice has a peculiar guttural, barking sound. The tongue is partially paralyzed; the patient can move it about in the buccal cavity with considerable ease, and can protrude it without difficulty; but this is only

partially complete, nor can the organ be elevated. The explanation of this is probably as follows: to the paralysis of the digastricus and stylo-mastoideus, which assist in the protrusion of the tongue, and on the other hand to the impaired action of the superficialis lingualis muscles, which tend to shorten it, inasmuch as it contracts the tip upward and backward. The sense of taste does not appear to be materially affected.

The symptoms of otitis were not greatly relieved by medication. Local abstraction of blood, cauterization of the mastoid processes, narcotic injections into the meatus, injection of air into the tympanic cavity, etc., though affording partial relief, did not lessen the discharge nor check the progressive deafness, which soon became complete, and were eventually followed by perforations of the membrana tympani. Electricity, which was used as a *dernier ressort*, had no effect whatever on the paralyzed muscles. The tuberculous symptoms were rapidly aggravated, and the fever and colliquative sweats exhausted the patient to such a degree that death ensued about two months after he first put himself under treatment.

At the post-mortem examination, made eighteen hours after death, the lungs were found in a markedly tuberculous condition. The brain and all the other internal organs presented no pathological appearances. The condition of the two temporal bones was a very interesting one. The walls of the Fallopian canals were intact throughout their entire length. The part of the facial nerves, however, passing through this canal was literally bathed in pus, while at its entrance into the meatus auditorius it was unimpaired. The walls of the middle ear were carious on both sides, as were the mastoid cells of both ossæ temporales. On the left side there was a loss of tissue, about the size of a pin's head, at the margin of the glosserian fissure, from which there was an exit of purulent matter from the tympanic cavity,

which had collected itself behind the left condyle of the lower jaw.

This case differs from the most of those recorded, inasmuch as in these the caries of the temporal bones generally extended into the Fallopian canals, thereby affecting the facial nerves more or less. In the above case, on the contrary, the canals were intact in spite of the diseased condition of the middle ear. As usual, the probable cause of the inflammatory process seems to be a cold, which, occurring in a tuberculous subject who had already been liable to aural discharges, afforded ample opportunity for a rapid spread of the disease.

This appears to us to be more probable than the supposition that the pus found in the sheath of the nerve was derived from the tympanic cavity, and had found its way down along the chorda tympani into the neurilemma of the facial nerve.

The case is of peculiar interest in respect to the paralysis of the facial nerve, as the connection between the pathological effects and the exciting cause is more marked than in the majority of similar cases previously reported. The pressure exerted by the inflammatory congestion on the facial in its course through the bony canal gave rise to the general paralysis of all of those parts supplied by this nerve. The digastric and stylo-hyoid muscles were paralyzed because the branches supplying these muscles leave the nerve-trunk previous to its exit from the aqueduct of Fallopius, while the soft palate, on the other hand, was unimpaired in its mobility. The compression exerted on the nerve was limited to the Fallopian canal, for those nerves situate in the parts exterior to and above the stylo-mastoid foramen remained unimpaired throughout the entire course of the disease.

LOUISVILLE.

THE CLIMATE AND FEVERS OF THE SOUTHWESTERN,
SOUTHERN ATLANTIC, AND GULF STATES.

BY JAMES C. HARRIS, M. D.

Although the West India Islands do not constitute any part of the Southwestern, Southern Atlantic, and Gulf States of America, a brief medico-topographical and meteorological account* of some of the larger of them will better enable us to show the great resemblance, if not entire identity, between some of the endemic fevers of the southern zone of the latter with those of the former.

These islands, which extend through some 23° of longitude, from $8^{\circ} 30'$ west to $14^{\circ} 30'$ east of the meridian of Washington, and from 10° to nearly $23^{\circ} 30'$ of north latitude, form a curvilinear chain from the southeastern point of North to South America, and are traversed by a range of mountains which can be traced from the northwestern point of Cuba through a number of lofty volcanic peaks on the Caribbean Islands to the shores of Venezuela. Their soil, resting upon a calcareous base, is, except where mixed with volcanic materials, generally argillo-arenaceous, and on the plains usually very fertile, producing in great abundance sugar, coffee, sweet-potatoes, tobacco, ginger, and spices, together with the tropical fruits.

Throughout the whole of these islands near the level of the sea the mean annual temperature is about 80° , and, according to the division of the seasons adopted in this essay, is for the winter 76° , for the spring 79° , summer 81° , and autumn 80° , with a very small annual and daily range of not more than 20° for the former and 6° for the latter. The temperature of the water in their harbors and for con-

**Vide* Woodhidge, Willard, Morse, and Mitchell (geographies); Medical Statistics United States Army; Sir James Clarke, Drake, and Forry.

siderable distances from their shores, and at various depths short of one hundred feet, ranges from 76° to 83° , with a mean of nearly 80° ; while the temperature of the surrounding sea-air is nearly as warm as that on some of the smaller islands.

Their range of atmospheric pressure is also very small, never exceeding an inch in any given year, and frequently not half this amount. Although the mean annual fall of rain in these islands is probably not more than sixty-five inches, there is a very great difference in this respect between them, it being much greater in the mountainous than the low ones; in Martinique, for instance, it is as much as one hundred inches, while in Antigua and Barbadoes it is respectively forty-five and fifty-eight inches. The smaller islands, unlike the larger ones, do not have regular alternation of land- and sea-breezes, but in their stead the easterly or trade-wind without interruption, except during the months of August, September, and October, when, although less regular, it is still the prevailing wind.

The winters and early part of the spring in the inter-tropical islands north of the equator are in general remarkably dry and the weather fine. The summer is dry and hot, and the autumn, particularly the month of October, the season of the heavy rains. In November the weather generally begins to clear up, the northeasterly winds resume their regularity; and from the beginning of December until the vernal rains of April and May the weather is dry, settled, and comparatively cool.* All these islands are subject during the summer and fall months to frequent thunder-storms and occasional hurricanes, which are sometimes truly terrific.

Among the forest-trees, shrubs, fruits, and flowers, which are similar to those of other tropical regions, we will only mention the royal palmetto, or mountain-cabbage tree; the campeachy and Brazilian trees; the corab, prized both for its

*Clark.

thick shade and its excellent fruit. The trees most valuable for timber are the tamarindus, the cedar, the Spanish-ash, and the iron-tree. The dwellings of the planters are shaded with orange-, lemon-, and pomegranate-trees, which fill the air with the perfume of their flowers. The apple- and peach-tree grow in the mountains, while several oriental fruits—the rose-apple, the guava, the mango—abound on the sultry plains. The coasts are shaded with every variety of acacia, particularly the Farnese, remarkable for the beauty of its flowers. The sides of the momes, or precipices, are covered with opuntias and torch-thistles, and on the rocks near the sea-shore grows the vine-tree.

Cuba, the largest of the West India Islands, geographically situated near the Gulf of Mexico, extends through 11° of longitude— $2^{\circ} 30'$ east and $8^{\circ} 30'$ west—of the meridian of Washington, and from $19^{\circ} 45'$ to nearly $23^{\circ} 30'$ of north latitude. In an interesting account of Havana, its chief emporium, Dr. Le Riverend,* after showing the existence of many sources of disease in the faulty construction of its houses and filthy condition of some of its principal streets; the bad construction of the wharf; the putrefying offals of flesh, fish, and vegetable materials, exposed under a tropical sun at the different market-places; the bad quality of the water from the artificial creek, which in passing through a suburb receives during the wet season the water, decomposing vegetable materials, and other filth from the streets; then observes that although the recent introduction into the city of the filtered water of the Almendares, together with some other improvements, have notably diminished the frequency and intensity of disease in general, it is certain that these benign influences have not extended to yellow fever.

The harbor of Havana, a land-locked bay, is surrounded on all sides by hills, except on its northern aspect, where

* Memoir on Yellow Fever. New Orleans Medical and Surgical Journal, September, 1847.

it communicates with the sea by a long narrow channel. Through a depression near its junction with the mainland, in a narrow peninsula which forms its northeastern boundary, the prevailing easterly winds are permitted to reach it. The bay is about eight miles in circumference; and with the exception of the small village of Regla, built upon a narrow slip of land which extends into the harbor, and a small peninsula, more than two thirds of its shores are occupied by fresh-water marshes, the first and most extensive of which lies near the city, and which during low tides or hot, dry weather is known to be a fruitful source of malaria. As the bay in many places is very shallow, and is somewhat lower than any of the surrounding localities, it is the receptacle of the greater portion of the filth of the city, much of the organic detritus of the surrounding country washed down through streams that empty into it, together with the drainage from the village of Regla, and the filth from the shipping with which it is crowded throughout a greater portion of the year. From these causes its water is very foul, being said to putrefy on standing in less than a single day, and when agitated often emitting a very offensive odor. There also exists at low tide (the tide here being from three to four feet), or during hot, dry spells of weather, when evaporation* and absorption are rapid and great, an extensive source of malaria in the marshy surface around its shores.†

During the first three months of the dry season, which begins in November and ends in May, the prevailing winds are from the north and northeast, and there is very little rain. Toward the end of February the hot south-wind commences to blow with force and frequency. During this period the dawn and the evenings and nights are cool, sometimes cold, but from ten o'clock in the morning until four

*See Lewis S. Pilcher, M. D., *Essay: Bureau of Medicine and Surgery, U. S. Navy*, 1873, p. 210.

†La Roche, vol. ii, p. 391; and *New Orleans Medical and Surgical Journal*, September, 1851, p. 207.

o'clock in the evening it is very warm. These atmospheric changes produce muscular and articular inflammations, neuralgias, intermittent fevers, and, together with the particles of dust with which the air is charged, affections of the eyes, bronchii, and lungs. During the succeeding three months of March, April, and May the heat gradually increases, the scorching south-wind being interrupted only in the morning and evening by light easterly breezes. At midday the air respired is truly suffocating, the mercury ranging from 96° to 97° in the shade. During the last two months (April and May) of this period cases of intense gastro-enteritis and gastro-encephalitis occur, which frequently assume the appearance of yellow fever.

During the rainy season, which begins in May and terminates in November, the prevailing wind is from the south, which, blowing across the western part of the island, arrives at the city laden with the exhalations from the numerous swamps over which it passes. At the commencement of this season it rains almost every day after midday. Yellow fever now becomes epidemic. As the summer advances, if the clouds which daily form on the horizon do not bring rain, the atmosphere becomes charged with electricity, and the heat from ten o'clock in the forenoon till five o'clock in the afternoon reaches a suffocating degree of intensity. During this peculiar atmospheric condition not only the creole but the stranger feels an invincible repugnance to the slightest exertion; and almost every disease now from its commencement, particularly yellow fever, takes on the hemorrhagic form.

In Havana the mean temperature of the coldest month is about 70° , and that of the winter season nearly 73° . Intermittents and mild remittents prevail throughout this period. As the winter season gradually advances into spring these types of fever become more malignant and unmanageable. In April or May some of them end in hemorrhage or black

vomit; or, in other words, yellow fever becomes epidemic, and continues to prevail in this form until about the 1st of December, and afterward sporadically throughout the remainder of the year.

Jamaica, on account of its greater size and the height of its central ridge of mountains, differs in some respects from the other islands in having a greater range of temperature, and therefore a greater variety of climate. Its mean annual temperature is 5° greater on its north than its south side. The most healthy district in this island is said to be in the mountainous part of the parish of St. Anne, near its center, in which the mean annual temperature is 76°.*

According to La Roche,† the number of persons who died on this island until recently equaled every five years its total population; and now on its plains and low coasts are found sources of malaria in great abundance, either in the shape of mangrove marshes, or wet and sandy surfaces covered with these or other shrubs, which grow and run to decay rapidly, constituting a kind of water-forest, the lower part undergoing decomposition while the upper is in a state of luxuriant growth and beautiful verdure.

Stony Hill is a small mountain, or rather a large hill, situated nine miles from the city of Kingston, at an elevation of thirteen hundred and sixty feet above the sea; is without either marsh or marsh-like land in its vicinity; but from its base to its top, a distance of about one mile, is a mass of calcareous rock, intersected by deep fissures and split in many places into large fragments. There is scarcely any soil, grass, weed, or herbage any where on its surface; but it is generally covered with forest-trees, the roots of which are exposed and cling to the rock, the extreme fibers dipping into the crevices and hiding themselves amid the detritus of rock, decaying branches, leaves, and other ligneous matters which are lodged there.‡

* Clark on Climate, p. 158. † La Roche, vol. ii, p. 393. ‡ La Roche, vol. xi, p. 402.

Notwithstanding this scarcity of soil and almost entire absence of herbaceous materials at Stony Hill, there is always present in the decomposing trunks, branches, leaves, and roots of the trees, together with other vegetable materials lodged in the holes and depressions on the surface, sufficient to produce after rains, under the influence of a tropical sun, malaria in abundance, and probably of the most concentrated character. That such is the case we think is demonstrated by the fact that the British soldiers quartered here have frequently been scourged by the most deadly epidemics of yellow fever.

The year 1825 was one of almost universal sickness, as well among the military as the civil population of this island. In the yellow-fever epidemic that prevailed at this time there were admitted to hospital from the 1st of February to the 26th of March, from the 77th Regiment, one hundred and ninety-eight men, besides an equal proportion of officers, women, and children. The fever was attended with hemorrhage and black vomit, and the proportion of mortality was one in four of the number admitted, yet it is described by Dr. Richardson as a fever of considerable excitement and of a purely remittent type.*

From the 26th of March to the 10th of May eighty cases were admitted, of which number twenty-one died. The dry, hot weather still continuing, the epidemic gradually increased in violence, the remissions becoming shorter and less distinct. Hemorrhages from every orifice were now a very frequent symptom, and many died in this way after the fever had subsided.

About the middle of April the rains began to fall, and, increasing about the middle of May, the epidemic disappeared. From this time until the 1st of June there was not a death in the hospital; and it was, says Dr. Richardson, not until after the continuance of some six weeks of dry weather

* *New Orleans Medical and Surgical Journal*, September, 1850, pp. 236-7.

that it again began to be sickly. The number of admissions of fever from this time, the 18th of July, to the 8th of September, amounted to about two hundred, of which fifty-seven died, the greatest mortality at any period of the year. During the month of August the fever assumed the continued type.

From the history of this epidemic, as well as of others which have at different times prevailed here, it appears that all the types of malarial fever—intermittent, remittent, and continued—under certain meteorological influences, blended or ran into each other; some of them terminating in death from spasms, exhaustion, hemorrhage, or black vomit; and goes to show that what La Roche styles *ligneous malaria* not only produces yellow fever, but all the other varieties of malarial fever.

From Dr. John Furlinge, a civil practitioner of Antigua, we learn that whether the fever there presents the intermittent, remittent, or yellow-fever type, the same atmospheric conditions give rise to them all; the more malignant forms appearing generally in the unacclimated, and the milder grades in the native and acclimated.

At Basse Terre, the capital of the island of Guadeloupe, yellow fever has on several occasions prevailed during the dryest and coldest and ceased during the wettest seasons of the year. It also appears to be a well-established fact that in the high, dry, and well-cleaned parts of the island of Barbadoes, where the soil is mostly calcareous and extremely light and absorbent, and all under cultivation, an uncommonly rainy season always brings on a time of general sickness; while in Trinidad, which is almost entirely a mangrove swamp, a dry season produces the worst forms of remittent fevers; showing, we think, that dry soils containing vegetable matters previously saturated with water, under a temperature of 80° and upward, become sickly; and that those flooded with water, and healthy during an extremely dry season, become unhealthy.

In his report to the Lords of the Council of the British Army Medical Department on yellow fever Dr. Burrell says:*

"In protracted cases of acknowledged yellow-fever epidemics distinct remissions are frequently observed; and cases presenting the remittent form frequently precede, accompany, and follow cases of yellow fever in the same regiment under similar hygienic conditions. Without therefore maintaining that yellow fever is always of the remittent type, it is fairly to be inferred that it is frequently so, and only fails to show remissions from the violence and rapidity of its course.

"I believe the causes of the aggravation and increase of the ordinary fevers, and their assumption of the yellow-fever form, to be always an epidemic constitution of the atmosphere in the Mediterranean and the Northern States of America, assisted by malaria in its extended sense, and these equally obtain in the West Indies and other places as far as relates to the native and other acclimated residents; deviations from this depending for the most part not on the arrivals of ships, as is alleged by the ultra contagionists, but on a more intelligible contingency—the presence of the unacclimated stranger. I also believe the yellow fever to have no specific character or pathognomonic symptom; not to be defined in its course, duration, or attributes; but an occasional variety of a numerous and protean class of fevers—continued, remittent, and intermittent—of certain latitudes, and to differ from these only in violence, rapidity of course, and ultimate phenomena."

In relation to the local origin and non-contagious character of yellow fever, we are informed by La Roche † that in every outbreak of it which he has observed in tropical regions all have been satisfactorily accounted for by local causes; that in numerous instances the disease has undeniably arisen without the possibility of tracing its introduction to an exotic poison, and that in others the freest intercourse between infected and healthy localities has been maintained without the least injury to the latter. In most tropical cities where the disease shows itself annually as an epidemic, and almost all

* New Orleans Medical and Surgical Journal, Sept., 1853, p. 263.

† La Roche on Yellow Fever, vol. xi, pp. 803-4.

the year round in a sporadic form, La Roche thinks it must be admitted to assume the epidemic garb, without the necessity of having recourse to an imported poison or assimilative ferment.

As no one now will deny the malarial origin of intermittent fever, we hold that, if any thing further were necessary to show that the other varieties had a similar origin, the facts we have just cited, together with the history given by Dr. Heustis of the bilious, remittent, or yellow fever that prevailed in Cahaba, Ala., during the fall of 1821; Dr. Gantt, of its occurrence in Selma, Ala., in 1824; Dr. Moore, at Fort Brown, Texas; and other examples of which the records of medicine are full; are sufficient, and ought, we think, to set the local origin and non-contagious character of these fevers forever at rest.

As the region of the West Indies, the shores of the Gulf of Mexico and Atlantic Ocean from Vera Cruz to Charleston, S. C., generally possess the topographical and meteorological elements of climate necessary for the production of the several varieties of malarial fever, we therefore conclude that the theater of their greatest prevalence exists within the limits of this extensive tropicoid and tropical region.

We think it clearly proven that the meteorological elements of climate, either singly or combined, are insufficient to produce any of the varieties of malarial fever; but that there does exist as the remote cause of fever an element the result of decomposing vegetable matters we think clear, from the fact that wherever we find a large amount of vegetable matter, in connection with certain degrees of heat and proportions of moisture, there we meet with febrile diseases. To this effect we have the concurrent testimony of the profession every where.

To the inquiry then, What is malaria? we answer, it is a gaseous poison, an intangible element, and demonstrated by innumerable histories to be the result alone of decom-

posing vegetable materials under certain conditions of heat and moisture.

Having thus endeavored to show that during the summer and fall months, in some localities on the Atlantic and gulf coasts, and for a certain distance up the valleys, and on the banks of some of the principal streams, all the varieties of malarial fever occasionally prevail, while in others—the more elevated, colder, and dryer portions of the interior—yellow fever never appears, we will now, upon the hypothesis that decomposing vegetable materials under certain meteorological laws are absolutely necessary for the production of the cause of malarial fever, proceed as briefly as possible to point out the influence exerted by heat, elevation, and atmospheric pressure in modifying its grade and limiting its altitudinal and geographical range.

At Stony Hill, Jamaica, with an elevation of thirteen hundred and sixty feet, yellow fever prevails in an epidemic form. In the Southwestern, Southern Atlantic, and Gulf States of America this grade of fever has never reached a greater altitude than that of Fort Smith, four hundred and sixty feet. "To the east" [under the name of autumnal fever], says Dr. Drake,* "its barrier is the Appalachian Mountains, into the very gorges of which it ascends by the valleys which penetrate their flanks to the height of three thousand feet; but as this chain is not found south of the thirty-third degree of latitude, it has below this parallel no eastern limit but the Atlantic Ocean. Three hundred miles to the west of the western boundaries of the states of Missouri and Iowa, and above the latitude of 37° north, the disease is almost unknown." To the north, about the forty-seventh parallel, it ceases to prevail even sporadically.

The mean atmospheric pressure at the level of the sea throughout the whole of the West Indies, at Fort Brown, Tex., New Orleans, La., Key West, Fla., and Charleston,

* *Principal Diseases Int. Val. North Amer.*, vol. i, p. 704.

S. C., is about 30 inches; at Stony Hill 28.715 inches; at Fort Smith, Ark., 29.500 inches; at Fort Thorn, Territory of New Mexico, and Fort Buchanan, Arizona Territory, 25 and 26 inches respectively; showing a difference in the atmospheric pressure between the shores of the West Indies where yellow fever annually prevails, and Fort Smith, where it has probably never occurred more than once, of 1.500 inches; and between Fort Buchanan, where it has never prevailed, a sea-level of upward of four inches, or nearly one seventh of the whole weight of the atmosphere.

The mean annual and summer temperatures at Stony Hill and Fort Smith are for the former 80° and 81° respectively, and for the latter $61^{\circ} 23'$ and 79° respectively; showing that although they differ widely in their annual they very nearly approximate in their summer temperatures. Upon this part of our subject we are informed by Dr. Drake that for the production of malarial fever it is the temperature of the summer more than that of the year with which it appears, most intimately connected, and that the fever will not prevail in an epidemic form where the temperature of this season falls below 65° ; and that if other conditions favoring its generation are wanting, it will cease before this reduction of temperature is reached; consequently the fever will occur in winter at any place where the mean temperature of that season is 60° or upward, as in the West Indies, at Vera Cruz, Tampico, Fort Brown, Key West, or Fort Brooke. From the equator, taking the West Indies and our southern gulf coast, up to about the twenty-eighth parallel we find every winter month rises above 60° ; and that as we advance from this parallel to the north there is a gradual decrease in temperature, until finally in the distant north the whole year falls below 60° ; but long before this reduction in temperature is reached the fever ceases; therefore it results that a continuance for more than two months of a heat equal to 60° is necessary for its production.

The states of Texas, Louisiana, Mississippi, Florida, Alabama, Georgia, and South Carolina border upon the Gulf of Mexico and the Atlantic Ocean, and, together with the southwestern portions of Tennessee, Arkansas, the Indian Territory, New Mexico, and Arizona, extend through some thirty-six degrees of longitude and twelve or thirteen parallels of latitude. They, it is true, possess considerable diversity of climate; but that this alone is not sufficient to furnish any other varieties of fever than those belonging to a tropical climate will, we think, be apparent when we recollect that there is no point within their boundaries at which the mean summer and autumnal temperatures fall as low as 60° , and that from the comparative mildness of their winters periodicity more or less marked is impressed on nearly every case of fever occurring throughout this season.

Having now endeavored to portray the great agent which regulates the production of malarial fever in all its varieties on this continent, it follows, we claim, that this form of disease can never originate at least in any region lying entirely above the forty-seventh degree of north latitude, and having a lower mean seasonal and monthly temperatures than those indicated. The accompanying table will show that the mean summer and autumnal temperatures of Paris, London, and Edinburgh fall considerably below these points; and hence it results that fever produced in either of them can not be identical with that occurring in the southern regions of the United States during the same periods of the year. And why? Simply because our fevers are the result of a high temperature long continued, and are attended with a disordered action of the hepatic system, and generally marked at some period of their history by distinct remissions and exacerbations, which characteristics they manifest throughout the entire round of the seasons; whereas fevers in the cities named, being the result of a low temperature long continued, must fail to present either of these features; thus establishing

a difference of type between them equal, if not greater, than that existing between the climates of our Southern States and that of Scotland. If this be true—and of which, we think, there is very little doubt—the inquiry here then very naturally arises, Do the mean temperatures of the winter and spring seasons of the states alluded to ever descend sufficiently low and remain so long enough to produce typhus or typhoid fever as it is seen in England and France? To answer this question properly would protract this paper to an unpardonable length; suffice it to say that we believe such is not the fact.

PLACES.	Latitude	Mean Annual Temp.	MEAN TEMP. OF THE SEASONS.				Difference between Winter and Summer.
			Winter.	Spring.	Summer	Autumn	
Key West, Fla.....	24° 34'	76° 36'	70° 08'	75° 97'	81° 85'	75° 54'	11° 79'
New Orleans, La.....	29° 57'	70° 19'	58° 03'	72° 06'	82° 03'	73° 04'	22° 00'
Mobile, Ala.....	30° 42'	70° 29'	57° 26'	70° 36'	82° 75'	71° 01'	24° 49'
Wetumpka, Ala.....	32° 30'	67° 50'	52° 57'	60° 12'	80° 44'	68° 13'	27° 47'
Natchez, Miss.....	31° 34'	67° 00'	52° 18'	67° 81'	80° 96'	67° 06'	28° 78'
Huntsville, Ala.....	35° 45'	59° 38'	42° 15'	59° 96'	75° 62'	59° 79'	33° 47'
Paris, France.....	48° 50'	51° 50'	38° 43'	50° 40'	64° 47'	52° 30'	25° 83'
London, England.....	51° 31'	50° 39'	39° 12'	48° 76'	62° 32'	51° 35'	23° 20'
Edinburgh, Scotland.....	55° 58'	47° 31'	39° 40'	44° 70'	57° 30'	47° 86'	17° 50'

As regards the season of the year when typhus fever is most prevalent, we find on examining the time of admission to the hospital of the fifty-eight cases reported by M. Louis as having died of this affection, that sixteen were admitted during the winter, nine during the spring, fifteen during the summer, and eighteen during the autumn; thus giving a decided preponderance (in the proportion of thirty-four to twenty-four) of admissions to the coldest seasons of the year; which, taken in connection with the latitude and mean seasonal and monthly temperatures of the locality, goes far to show (what we believe is the fact) that typhus is a disease not only of high latitudes, but that it prevails to the greatest extent during the periods of greatest cold.

Without attempting to show that the above cases of M. Louis originated under circumstances known to be inadequate to the production of malarial fever, the possibility of their identity with the fever that occurs during the summer and fall seasons with us is, we think, completely destroyed by the fact that they prevail at seasons of the year the low temperature of which is known to be fatal to every variety of malarial fever.

Before we can admit the possibility of these fevers originating within the boundaries of the region under consideration we would have to be first shown that there are places within these geographical limits where the winter temperature descends sufficiently low, and remains so long enough not only to destroy the malarial and hepatic features of our diseases, but to produce a fever the result of cold, of overcrowding, or of other causes, and recognizable by symptoms identical with those of the European varieties, and this we consider next to impossible to do. Notwithstanding we know of localities in the northern portions of the states in question in which the winter temperature does sometimes fall as low as that observed during the prevalence of these varieties of fever on the eastern continent, still when we compare the sparse population of these districts with those of Great Britain and France, and recollect that clearing, draining, and putting into cultivation large tracts of country accomplishes, in connection with increase of population, corresponding changes in the types of disease greater, if possible, than it does in the physical features of the country itself, their advent among us is made to no inconsiderable extent dependent upon and connected in the future with a period which stands in relation to these changes as cause and effect, and which when attained can never produce any thing more than a modified type of these varieties of fever, which are, in our opinion, strictly the offspring of a hyperborean climate.

WETUMPKA, ALA.

HOSPITAL OBSERVATIONS UPON NEGRO SOLDIERS.

BY A. W. M'DOWELL, M. D.

During the recent civil war I had ample opportunities for observing the United States colored soldiers in regard to their physical organization, their power of enduring disease or wounds, and for witnessing numerous autopsies. I write simply the results of these observations, not seeking to establish any theory nor to confirm any prejudices, and I am a firm believer in the unity of the human race. I present the truth as it was obvious to me, and I should be glad if others having like opportunities would do the same, and then possibly we might arrive nearer a solution of some of the difficult problems in reference to the negro.

I was on duty during a part of the war at Benton Barracks, near St. Louis, at that time the rendezvous of the colored troops of the Western Department. At one time there were seven thousand of these, together with probably three thousand unenlisted negro men and women and children, all drawing United States rations and entitled to medical services.

Before going to Benton Barracks I had been in charge of the hospital at Ironton, Mo., and while there an order was issued directing post-surgeons to examine all colored men in their vicinity, so that if found healthy and available they could be enlisted. Under this order I made numerous examinations, and many enlistments were made. I had examined many white men before, but this was almost my first experience in the examination of negroes, and I was much pleased with the subjects. Such fine development of chest and lungs, according to the standard measurement, I seldom had seen; the expansion and contraction perfect, the measurements up to the fullest standard of army requirements. But

when I went to Benton Barracks I saw these soldiers, apparently so fully developed and with such ample chests, dying *easily* and very rapidly of pneumonia, the disease being much more fatal among them than among the white soldiers. I was disappointed, mortified, and surprised that my splendid soldiers should succumb to disease so soon. But autopsies explained the mystery. These soldiers had a remarkable development of the pectoral muscles, and their mammæ were almost as large as women's; but their lungs were much less in weight than the white man's. This proved to me that expansion, contraction, and external measurement of the chest were by no means certain criteria of vital power. Besides, the negro with pneumonia will not bear reducing treatment; he must have stimulants from the first.

Our autopsies too showed that his brain was smaller than the white man's. In the hospital there were two thousand patients—fifteen hundred whites and five hundred colored—including various shades, from mulattoes to full-blooded negroes; the mortality was vastly greater among the latter than among the former. We weighed every brain in our post-mortem examinations, and just in proportion to the admixture of Caucasian blood did the weight increase; the white man's brain was the heaviest, and thus down to that of the pure negro, which was the lightest. I say nothing of relative intelligence. I present no opinions, but simply physical facts.

The negro's liver was larger than the white man's. Masters in the South supplied their slaves with corn-meal, bacon, and molasses. The army ration of the colored soldier differed from that of the white, the former being bacon, corn-meal, and brown sugar. Since the negro's lungs were smaller, his larger liver helped to decarbonize the blood, and thus a proper equilibrium was maintained.

The negro's lower bowel was smaller. The colored troops were much troubled with constipation, often requiring purga-

tives, while at the same time and place the white troops had diarrhea. The most marked difference existed between the spleen of the black and that of the white, the former only weighing half as much as the latter. "Ague-cake" was one of the sequelæ of malarial disease observed among the whites, but not among the blacks. The genital organs of the negro, especially true of the penis, were much larger than those of the white man.

These autopsies were made carefully, daily and for a length of time, and the results were as stated. I testify to facts that I repeatedly witnessed. To me they were most striking, almost startling, and I leave my readers to draw their own conclusions from them; but one thing is certain as I saw it—there is anatomically a marked difference between diseases in the black and the white.

This was my first experience in treating the diseases in negroes, and I embraced every opportunity for the faithful study of these diseases; and all my professional associates and I were united in the opinion that these people do not bear up under disease as well as the whites. So too as nurses for each other they are careless and indifferent. In all our wards the head nurses were white, the subordinates colored. With all our care and supervision the negro mortality was fearful, three times as great as that of the whites. In case of wounds I did not observe this difference. The negro was rather proud of being shot, and would point with exultation to his wound.

The treatment of pneumonia excited considerable controversy, some warmly advocating *veratrum viride*; others quinia, Dover's powder, and stimulants; but there was no difference of opinion as to pursuing the latter plan in case of negro patients, for unless thus treated they all died, and even then the mortality was very great.

Cerebro-spinal meningitis was a frequent and very fatal disease among the colored troops. It generally commenced

with pain and stiffness in the nape of the neck, almost like the soreness of rheumatism; sometimes there appeared to be congestion of the lungs. The first stage—the patient being restless, feverish, and uneasy—continued from twenty-four to thirty-six hours, when the second stage, characterized by mild delirium, bright and injected eyes, and all the evidences of intense cerebral excitement, supervened. In this stage contraction of the fingers and arms occurred, though with the use of some force it could be for the moment overcome. The patients were conscious, looking anxiously in your face, but seldom speaking. The second stage lasted, according to the age and strength of the patient, from thirty-six to forty-eight hours. Then came the third and fatal stage—I say fatal, because I never saw a colored man recover, although a few whites did recover—characterized by profound stupor, low muttering delirium, the tongue and teeth covered with dark sordes; then contraction of the toes and of the legs; and finally opisthotonos, sometimes so complete that a pillow could be readily slipped under the back, followed by death. Occasionally a white patient would recover under large doses of quinia and capsicum, but a black one never.

Frequent post mortems showed intense congestion just at the junction of the spinal cord and the medulla oblongata, and effusion of fluid, generally one or two tea-spoonfuls. The lungs were much congested, which condition we generally regarded as an effect of the spasms, not an essential of the disease, looking upon the latter as seated in the upper part of the spinal cord and in the medulla oblongata.

PLUCHAMIN, SOMERSET COUNTY, N. J.

TUBERCULAR ULCERATION OF THE LARYNX.

BY F. C. CURTIS, M. D.

Gustave S., aged twenty-eight years, laborer, was first seen about three months before death. He came to the office complaining of trouble in his throat mainly. He has been hoarse for a year back. This came on gradually, and for some time he has been unable to speak above a whisper. There has not been complaint of much pain in the part. He has been engaged in herding cattle at West Albany Yards, and the cause assigned for his throat affection is shouting to the cattle in driving them. His father says that he has been very intemperate in the use of his voice, straining it without reason. The same lack of care has been observed in other things; he has exercised violently, and then sat in a cool place, chilling his body, or has drunk immoderately of cold water and sometimes of alcoholics. He has not been excessive, however, in the continuous use of the latter. His father states further that he has for several years had cough after slight exposure. For the last three years this has been more steady. He has been irregular as to time of taking food; still, in spite of cough and dysphonia and utter disregard of health, he has until recently been a pretty strong fellow, and has never had any severe sickness. He has had occasional pain in the chest; more of late. This he does not complain of as severe. He has too lost strength somewhat, and is emaciated. Expectoration is recently somewhat abundant. No night-sweats.

Having come principally on account of his throat, it was examined with the laryngoscope. There was found moderate œdema of the aryteno-epiglottidean folds on both sides, extending pretty uniformly around the glottis. The epiglottis was not affected, and a very good view of the cords through-

out with their surroundings could be obtained. A large ulceration was found on the right side posteriorly, over the arytenoid cartilage, affecting the posterior third of the vocal cord, but having its center above it in the ventricle. Phonation was prevented by the inability to bring the two vocal cords in contact from loss of substance and circumscribed action of the left cord.

The ulcer was quite deep, but not abrupt, nor was there thickening or granulations of the edges; outline was ragged; no apparent discharge. Surrounding it was congestion and moderate cedema, but no other lesion was discovered. Anæsthesia of the throat generally was somewhat noticeable, as the first examination was very readily borne.

Examination of the lungs showed consolidation at both apices and fluid in the bronchii. His general appearance was fair.

Treatment was directed solely to his general condition; tonics and cod-liver oil were given, and directions as to care of himself. He came to the office at irregular intervals for a few times, no particular change being noted. He then ceased to report himself, and occasional word was brought that he was failing. It is probable that he took but little care of himself. He gradually failed in strength, and night-sweats (very profuse, with severe hectic fever) came on.

Called to see him near the end of February, six weeks before he died. Found the affection of the lung had extended very rapidly, and was far advanced from the condition of a month before. Mucous and submucous râles were heard all over both lungs, and the evidence of cavities forming at both apices. Cough was harassing and constant, expectoration being very abundant. He complained of almost no pain, but was unable to sleep from cough and sweating at night. The latter was checked somewhat by sulphuric acid and hyoscyamus. The bowels were not affected. There was no change in throat symptoms.

From this time the disorganization of the lungs advanced rapidly. He emaciated, and œdema of the face and extremities came on. He kept about the house to the last, and rode down town in a car a fortnight before he died. He was perfectly conscious to the last. Died April 7th.

Post-mortem examination was made twenty hours after death. Body was a good deal emaciated, and extremities œdematous.

Thorax.—Both lungs were bound by very firm adhesions to the chest-walls for the upper third, lung-tissue tearing up in attempting to separate them. This was more extensive with the right lung; and at one point was a ring of adhesion two inches in diameter, into which a cavity of the lung had perforated, matter and air oozing out as the lung was removed at this point. There was a small amount of effusion into both pleural cavities.

There were deposits of tubercle throughout both lungs, completely studding them, so abundantly as to almost solidify the tissue in parts. This was mostly of miliary size, but there were masses of the size of a hazel-nut. In the lower lobes there were recent gray tubercle, further up they were caseous at the center; and at the upper fourth of both lungs there were very many cavities, some being filled with caseous matter simply, as if just transformed from tubercle, others containing more or less purulent matter. Some were quite large, with ragged sides, and filled with pus and mucus. Muco-purulent matter exuded from the lungs on section, extensive tracts not being aerated. Only a small portion of the lower lobes along the anterior edges crepitated normally.

Examination of the larynx disclosed a large ulcer on the right side, at the posterior extremity of the vocal cord, ventricle, and false cords. It was quite deep, extending into the soft tissue above the cricoid cartilage, anterior to the arytenoid and deep down toward the wing of the thyroid. It did not involve much of the cord, not cutting entirely

across it, though a sinus ran in back of it. The outline was irregular, but the sides were pretty smooth. A superficial ulceration of the mucous membrane surrounded this, the whole being about the size of a five-cent piece, and of this the ulcer proper occupied rather more than half.

Directly opposite this ulcer, at a corresponding point of the left side, was a still deeper ulcer, but not affecting the vocal cord by ulceration even of its mucous membrane. It was in the ventricle, and was a mere slit, in its long diameter four lines in length. It was on the line of the superior border of the cricoid cartilage posteriorly, extending back nearly to it. It could only be seen by separating the parts, being closed and invisible in a natural condition of the tissues. Extending upward from it was a considerable superficial ulceration of the mucous membrane.

The entire inner surface of the larynx was swollen, the cords, both true and false, being thickened so as to be hardly recognizable, and almost obliterating the ventricles. The anterior surface of the larynx was not so much affected, and the epiglottis was hardly at all thickened. There was a good deal of œdema of the tissues between the cricoid and thyroid cartilages, probably induced by the ulcers extending deep into them.

In the trachea there were a few quite superficial ulcerations or erosions of the mucous membrane. In one point only, low down toward the bifurcation, there was one that appeared to go down nearly to the cartilage.

The heart and the abdominal organs were healthy, presenting no material change.

A few words in regard to this somewhat rare affection may perhaps not be out of place.

First, in regard to the propriety of the term "tubercular ulcer." It is a question in debate whether the morbid process by which these ulcers exist is really tubercular—*i. e.*, whether they are due to the deposit of tubercle in the tissue, which,

breaking down, causes a destruction of tissue—or whether they are simply the result of inflammatory action apart from any heterologous deposit. Virchow says tuberculous ulcers do actually originate from miliary tubercles. The absence of these so frequently, which leads other observers to deny altogether their presence in connection with ulcers, he explains by the perishable nature of these deposits. He asserts that he has found them himself.

Rindfleisch allows that they may be developed from tubercles; led to do so partly by the assertion of Virchow, and partly from having himself observed in microscopical sections, vertically through ulcers, clusters of cells situated well below the surface in the midst of connective tissue still intact, which remind him strongly in their behavior of miliary tubercles. "These tubercles, however," he says, "are so sparingly disseminated, and appear so insignificant in comparison with the inflammatory infiltration of the ulcerated surface itself, that I would only regard them as a pledge of the connection of the morbid changes with constitutional tuberculosis; at least they could only be raised to the dignity of permanent inflammatory irritants." *

Niemeyer seems to believe in the tubercular origin of these ulcers. He says the severity of the cough can not account for them, for it is often more severe in mere bronchial affections; neither, for the same reasons, can they be said to originate from foul, acrid secretions from lung cavities. Their anatomical appearance too as described by him indicates this opinion. We first observe, he says, gray round granules the size of a millet-seed, which turn yellow, soften, and disintegrate, leaving a small round ulcer. Fresh deposits in the vicinity occur, and the resulting ulcers run together, forming an irregularly-shaped loss of substance. More frequently though we first notice a yellowish discoloration, which the microscope shows to be an infiltration with small cells. The

*New Sydenham Publications, vol. liv.

mucous membrane becomes relaxed, and a shallow ulcer follows, which may afterward extend very deep. I quote almost his words.

Türck, of Vienna, whose authority in affections of the larynx is received with great respect throughout Germany, though he has now been dead several years, says that deposit of tubercle is not often the direct cause of these ulcers, yet it is beyond a doubt that a certain number of them are due to it. The most common cause is catarrhal and follicular inflammation. Cohen, of Philadelphia, is very doubtful as to tubercle being deposited here, and would regard the small white pin-head points described as miliary tubercle as in most cases enlarged follicles.* Other observers utterly refuse to allow that tubercle is present or participates in these ulcers.

But it is not necessary to quote the opinion of a long list of authorities on this subject, which is of no great practical importance in the direct consideration of these ulcers. It has occurred to me, however, that it might be a good field to study tubercle itself, and might throw light on the now widely-discussed pathology of this heterologous formation.

The general opinion, held by most of the best authorities, seems to be that a limited number of the ulcers occurring in the larynx with phthisis are caused by a direct deposit of tubercular matter.

Ulcers may occur in the larynx from a variety of causes. Besides the one under consideration, there are those due to syphilis; to inflammation of the mucous membrane, either catarrhal or of the glands; to diphtheria, cancer, etc. The diagnosis of the ulcer of tuberculosis from all the rest is particularly desirable, inasmuch as the treatment is quite the opposite from most of them. While other ulcers may be made to heal only by severe treatment, cauterization perhaps, these are to be let alone, or to be soothed by sedatives and protections; but the appearance presents little that is char-

* Cohen on Diseases of the Throat, p. 357.

acteristic, as far as I have been able to learn. Any of them may be superficial or deep and extensive. There are, however, certain guides to a satisfactory conclusion. The ulcers of cancer are accompanied by lancinating pain, the absence of which may exclude it; also the locality of the cancer-ulcer, which affects preferably the anterior portion of the larynx, when affecting it alone. The most common variety of cancer met with here, according to Rokitsanski, is the epithelial, this being a favorite locality for its development. Its diagnosis lies mostly between it and syphilis, which it resembles more than other ulcers.

Between tubercular and syphilitic ulcers the diagnosis may be in a measure reached by the locality. Syphilis attacks most commonly the epiglottis, and hardly ever the vocal cords. Tubercular ulcers are found more at the posterior portions of the larynx, affecting the false and true cords and the vestibule, rarely attacking the cartilages, and seldom attended with much œdema, both of which occur with syphilitic ulcers. Trousseau says that a dusky color of the membrane is diagnostic of syphilis. Aphonia is more complete in tubercular than syphilitic ulcerations. An ulcer seated on the posterior portions of the larynx, attended with only moderate œdema, causing more or less complete aphonia, lasting perhaps for a long time without producing great destruction of tissue, the pain of which is of moderate severity or but little noticed, and finally co-existing with phthisis of the lungs, may be called a tubercular ulcer. I think this is about a fair picture of it. Only a small portion of the cases of sore-throat with phthisis are due to ulceration, the existence of which can only be made certain by the laryngoscope.

A word only in regard to treatment. I think but little is called for locally. The ulcers are seldom of themselves the immediate cause of death, and then probably only by opening into the œsophagus. Their tendency is, after advancing to a certain point, to become stationary, often producing but little

serious inconvenience. Such at least is the result of my own limited observation. Occasionally they are said to heal of themselves.

The general treatment pursued in phthisis will naturally suggest itself in these cases, and where the disturbance caused by the ulcer is not too great will often be alone sufficient. The use of topical means is to be limited to the relief of the local irritation caused by the ulcers. Cough, which under such circumstances is a powerful irritant, is to be subdued. For this purpose morphia applied locally is sometimes useful. Nitrate of silver in solution, carried on a bit of sponge directly to the entrance of the glottis (Niemeyer), and inhalations of carbolic acid (Cohen) may also be employed for this purpose.

ALBANY, N. Y.

Reviews.

Archives of Ophthalmology and Otology. Edited by Prof. H. KNAPP, M. D., in New York, and Prof. S. Moos, M. D., in Heidelberg. Vol. IV., No. 1. New York: William Wood & Co. 1874.

The above volume of Knapp's Archives of Ophthalmology and Otology will be found replete with interesting material. Recognizing the want of a more frequent publication, the editors have determined to make their journal a quarterly instead of a semi-annual, which it formerly was. In order to secure its regular issue, two associate editors—viz., Dr. E. Gruening, of New York, and Dr. C. J. Blake, of Boston—have been added, who are to assist respectively in the departments of ophthalmology and otology.

The number before us contains fourteen original articles and a review on each branch treated of by the Archives.

The first article is on a case of *glioma* with numerous subperiosteal metastatic tumors, and is reported by Drs. H. Knapp and Chas. S. Turnbull. Accompanying it is a lithographic plate illustrative of the microscopic and macroscopic appearances of the tumor. The interesting feature of the case consists in there being numerous metastatic tumors on different parts of the cranium, as well as in the right orbital cavity; and that they differed from other cases on record in that they did not originate in the diploë, but between the periosteum and the surface of the bone.

The second article is also on *glioma*, and is remarkable as showing in the case reported a family disposition to the disease, and by the obvious origin of the affection in the

inner granular layer of the retina. It is reported by Dr. J. Thomson and Dr. Knapp, and is accompanied by two wood-engravings.

In the third article we have the results of the microscopic and macroscopic examination of two peculiar cases of sarcoma of the choroid by Dr. E. Williams, of Cincinnati, and Dr. Knapp. The first is an example of sarcoma of the choroid with infection of the retina and dissemination of germs from the degenerated retina upon healthy portions of the choroid; the second is a case of melano-sarcoma of the choroid extending to the retina and optic nerve, and presents several very interesting features, which we would like to discuss, but want of time and space forbid.

The fourth article is a report of three cases of tenotomy of the superior and inferior recti, with comments, by Dr. Knapp. Tenotomy of these muscles is but seldom performed, and the success attending the operations is a most gratifying one. In the first case the muscles were tenotomized for paresis of the upper rectus, in consequence of which there was impaired motion of the eye upward and downward, and marked diplopia above ten degrees below the horizon. The external rectus of both eyes and the inferior rectus of the left eye were divided in the second case, in order to relieve strabismus and diplopia; while the last, a case of strabismus sursum vergens, was improved by tenotomy of the superior rectus with a suture, increasing the effect, through the lower lid, and cured by advancement of the inferior rectus.

We next have the translation of "Clinico-ophthalmological Contributions," by Dr. Landesberg, of Elberfeld, Germany. Dr. L. reports first a case of *corectopia binocularis*, and next two cases of embolism of the central retinal artery, which present no particularly interesting points. A report of two cases of embolism of branches of the central artery follows.

Dr. Knapp again presents us with a new ophthalmoscope, which, besides other advantages over the instrument described

in the last Transactions of the Ophthalmological Society, is purchasable at the comparatively low price of twenty dollars.

Dr. A. Schapring, now of Milwaukee, reports a case of paresis of accommodation with apparent myopia.

Dr. Thomas R. Parley, of New York, reports a case of *keratitis vesiculosa* with secondary glaucoma. The presence of this complication suggested the idea to Dr. P. whether the continuous application of atropia used in order to combat the herpes did not give rise to the glaucoma. This is very improbable, as in nearly all cases reported of *herpes zoster ophthalmicus* there was loss of vision and destruction of the eye. In the last Transactions of the American Ophthalmological Society Dr. B. Joy Jeffries, of Boston, reports two cases with loss of the eye, and Dr. H. D. Noyes, of New York, one case with a like result.

We next have an interesting historical note concerning the physiology of the cochlea, by Dr. Schapring. A passage from a work by Du Verney, published in 1684, is quoted to show the similarity of the hypothesis of Helmholtz and the author just mentioned, that there are fibers in the cochlea which correspond to every musical tone, which by their vibration excite nervous fibers attached to them.

The report of a remarkable case of phlebitis of the sinuses of the dura mater, caused by otitis, and terminating in recovery, follows. This is from the pen of Dr. R. Wreden, of St. Petersburg, and is reported with an exactness characteristic of the distinguished writer.

Dr. Oscar Wolf, of Frankfort-on-the-Main, publishes his interesting investigations on the methods of examination and the derangements of hearing. Dr. Wolf criticises the different tests now employed by specialists for determining the acuity of hearing, and again urges the claims of the human voice to being the most reliable test, as he has previously done in his work on *Sprache und Ohr* (Speech and Hearing).

Dr. Wreden, who first called attention to the study of the

aural fungi, gives us a *resumé* of personal and foreign observations on *myringo-mycosis aspergillini*, extending from 1869 to 1873. The disease mentioned is an inflammation of the tympanic membrane caused by the irritation produced by the presence of a fungous growth in the auditory canal, the *aspergillus niger* or *flavescens*.

Dr. Charles H. Burnett follows in a report of a case of the disease mentioned above, illustrative of the typical features of the affection.

The last original article describes a case of pearly tumor (cholesteatoma) in both ears, by Chas. J. Kipp, M. D.

The associate editor, Dr. C. J. Blake, gives us an "otological review," in which all the more recent works and articles on the ear are mentioned and criticised with a leniency truly wonderful. Only the good points of the works under review are mentioned, while their faults are left unnoticed. This may be a very politic course to pursue, but according to our notion a review ought to be more discriminating in its judgment. The same, though in a lesser degree, may be said of the ophthalmological review by E. Gruening and H. Knapp.

The Archives are published by the well-known firm of Wm. Wood & Co., of New York, and are gotten up in the best style of the printer's art. We hope that the enterprise will meet with the success which it deserves, and think that every physician interested in the branches treated of should assist the editors in their work.

R. C. B.

[Other reviews prepared for this number, and omitted for want of space, will appear in October.]

Clinic of the Month.

NEURALGIAS OF THE JOINTS.*—About fifty years ago the English surgeon Brædie reported, under the name of hysterical disease of the joints, the case of a young woman attacked with a painful articular affection. This disease, analogous to *arthritides*, which are accompanied by peri-articular swelling, should nevertheless be clearly separated from inflammation of the joints; and, according to Brodie, four fifths of the cases of articular maladies observed in the upper classes should be placed in this class.

In Germany Stromeyer first gave a good description of this disease, and has recently published a small work upon the subject.

The compendium of Pitha and Billroth contains a special chapter by Volkmann devoted to this subject. On the other hand, it is not mentioned in the monograph upon diseases of the joints by Hunter.

Recent works have called attention to this malady, which possesses the greatest interest with reference to diagnosis and treatment. We first cite that of Esmarch, in which thirty-eight cases are collected, some of them his own. Wernher, in his work, presents new views, but he bases them upon observations different from those of Brodie, and which tend to obscure rather than to enlighten the subject. According to him nervous coxalgia consists in a morbid process analogous to that which is observed in diseases of the epiphyseal

* We have translated this article, by V. Berger, of Breslau, from the *Archives Générales*. It was originally published in the *Berlin Klin. Wochenbuch*. In the translation we shall omit Dr. Berger's cases.

cartilages. It is owing to a local nervous disturbance, and inflammatory symptoms are absent or appear subsequently. He thinks that nervous coxalgia may result in suppuration. It is difficult to admit the identity between the disease of Brodie and that of Wernher. The observations of the latter relate to children of from eight to twelve years not presenting any disturbance of the nervous system, and in whom certain muscular groups of the thigh are contracted, others paralyzed, atrophied, without electric reaction. In a word, it is impossible not to regard these cases other than an insidious and benign form of common coxalgia.

The designation of Brodie, *hysteric coxalgia*, ought not to be retained, since the disease occurs in females presenting no other hysteric manifestation, or even in men. That of Esmarch, *articular neurosis*, seems to us neither sufficiently clear nor definite. We prefer the term which Brodie subsequently used, *neuralgia of the joints*, *arthro-neuralgia*, because in the opinion of all authors the disease is a neuralgia of the sensitive nervous filaments, distributed to the articulations or to the neighboring parts.

Neuralgias of the joints occur much more frequently in females than in males; and especially in the upper classes, in girls whose nervous systems have been enfeebled by false education. The patients present sometimes only the physical symptoms of this debility, supervening with anæmia, chlorosis, menstrual disorder, and at other times the characteristic symptoms of hysteria. It is easy to understand the *role* which may be exercised by the passions in subjects thus constituted. Nevertheless sometimes the disease is met with in healthy young girls, whose nervous systems are normal in functions, and it is also met with in men.

As to etiology, gastric disorders, irritations of the urinary system, vesical calculi, urethral stricture. (Stromeyer.) As occasional causes, traumatic lesions. (Brodie.) In these cases the acute symptoms have disappeared, and there remains

an articular neuralgia. Thus Esmarch has seen the disease originate from a fall in dancing or in skating, from a bruise with effusion of blood in the knee-joint. In a case of neuralgia of the knee observed by Mayo an unsuccessful amputation of the thigh was performed, and the autopsy showed neuromata of the posterior branches of the nerves. Home found in a crural aneurism the explanation of the violent pain experienced by a patient in the knee. At the autopsy, the patient dying of phlebitis, some filaments of the crural nerve upon the surface of the tumor; these filaments terminated at the level of the painful part. I have seen a woman, forty-eight years of age, with a neuralgia of the knee following profuse uterine hemorrhage.

Volkman classes with neuralgias of the articulations those complex cases where there is chronic inflammation of the joints with considerable disorder in their constituent parts or in the neighboring tissues, becoming subsequently the seat of violent neuralgic pains, sometimes periodic. But he distinguishes between painful nervous articular contractions and neuralgias of the articulations. The first occur in girls or women, hysterical or not, and are characterized, besides the neuralgic pains, by muscular contractions which render the joints immobile. The contractions, according to Volkman, are reflex, and due to an irritation of the synovial membrane, whence there is in these patients an articular affection producing violent reaction. Nevertheless a simple neuralgia may by reflex action cause contraction, just as a neuralgia of the third pair will cause tonic and clonic contractions of the muscles of the face. Acute maladies, such as typhus and scarlatina, may produce articular neuralgia.

To sum up, the causes of these neuralgias of the articulations are the same as those of neuralgias elsewhere, except that hysteria exercises a much greater influence in their production. Arthro-neuralgia is a malady of peripheric nervous province; but the point of departure may often be found in

an anomaly, congenital or acquired, of the central nervous system.

This malady often affects the knee. Of eighty-one cases collected by Esmarch, fifty-one his own, the disease in thirty-eight involved the knee, eighteen the hip, eight the hand, seven the foot, and four the shoulder. This peculiarity, according to him, is due to the fact that the nerves of the knee and of the hip originate in tissues which have in the pelvis numerous connections with those of the abdomen and of the genital organs.

The disease occurs in the vertebral articulations, and perhaps it is necessary to include in it the *rachialgias* so often observed in hysterical subjects. It is impossible to determine in any way, as Esmarch observes, in these patients whether the pain is seated in the intercostal space or in the small vertebro-costal articulations.

As a rule, the neuralgia is mono-articular; nevertheless sometimes several articulations are attacked simultaneously or consecutively. Thus Hirsch has seen a girl of sixteen years suffering in both ankles; Lehman one of ten years affected in each knee; Griffin a man of thirty years who was seized with pains simultaneously in the hip, the knee, and the elbow; Esmarch also reports cases of multiple neuralgias.

Articular neuralgias occur more frequently in the inferior extremities, and when occurring in the superior they are ordinarily symmetrical, and may simulate disease of the spinal cord or its coverings. Cruveilhier has reported the case of a woman, fifty-two years old, whose autopsy showed a gray degeneration of the posterior half of the cord.

I have seen consequent upon the war a certain number of analogous cases sent to the hospital under the rubric of chronic articular rheumatism. At first it was difficult to decide if the diagnosis was correct, or if there was an affection of the cord; the latter, however, was recognized by a thorough examination. The articular affection, sometimes

associated with swelling, was entirely similar as to the neuralgic pains which are observed in spinal affections. It was a question of *tabes dorsalis*, its first manifestations being multiple neuralgias of the articulations. It is then impossible to be content with the vague expression rheumatic pains, and it is always necessary carefully to study cutaneous and muscular sensibility; thus we will avoid grave mistakes.

I have also seen, consequent upon hemiplegia, which was generally light, from cerebral hemorrhage, violent and obstinate neuralgias of the shoulder, rarely of the knee and of the hip. Recently I treated such a patient, in whom the pains became more intense at night, and who was several months unbenefited by treatment. There was no perceptible lesion of the scapulo-humeral articulation, but there was a cutaneous hyperæsthesia and pain upon pressure at the level of the brachial plexus. The long-continued use of galvanism was beneficial.

The symptoms of arthro-neuralgias are those of neuralgias in general, except that the former derive some peculiarities from their hysteric origin. There is especially violent pain, not continuous but presenting exacerbations more or less distinct, affecting the joint. This pain does not remain circumscribed, but it extends to the neighboring parts; and in reference to diagnosis it is very important to observe the disproportion between its violence and the comparatively slight articular alterations.

In a great number of cases the painful points pointed out by Valleix in neuralgia will be observed. In reference to the hip-joint, I have found a painful point midway between the trochanter major and the tuberosity of the ischium; again it may be found a little outside of the anterior superior spinous process of the ilium. As to the knee, there is almost always a painful point at the level of the internal condyle of the femur upon the internal border of the patella. (Esmarch.) I have found it at the external border of the patella below

the point of this bone, and behind at the superior part of the tibia. In a case of tibio-tarsal neuralgia I have found two painful points at the level of the two malleoli. According to Esmarch, the entire articulation is painful, with the most sensitive points situated behind and in front of the malleoli. At the shoulder-joint the entire brachial plexus is sensitive in the *supra-* and *sub-clavicular fossæ*. In a patient suffering with neuralgia of the elbow Benedicht found an exaggeration of sensibility at the level of the external condyle of the humerus and at the head of the radius. At the wrist the painful point is characteristic at the styloid apophysis of the cubitus or ulna.

The arthro-neuralgias do not escape the law common to neuralgias, and it is not unseldom that at the commencement there is a cutaneous hyperæsthesia which may extend to the entire half of the body, replaced subsequently by cutaneous anæsthesia. Brodie has previously pointed out one peculiarity of articular neuralgia: simply touching the painful part produces more violent suffering than firm pressure; in fact, when the articular surfaces are strongly pressed against each other pain is not produced, contrary to what occurs in arthritis. The anæsthesia consecutive to hyperæsthesia of the skin has only exceptionally been referred to by authors, perhaps because their attention has not been directed to this interesting point. Volkmann quotes from Bodaert the case of a hysterical subject with neuralgia of the mamma in whom there suddenly occurred *talipes varus*. Attempts at reduction caused violent pains, nevertheless there were anæsthesia and analgesia extending from the instep to the leg.

In two patients not hysterical I observed cutaneous anæsthesia at the level of the diseased articulation; in one with neuralgia of the knee it was moderate; in the other, neuralgia of the knee and of the hip, it occupied the entire thigh. I have also observed paralgesia in my patients.

Besides these symptoms, disturbances of the vaso-motor

nerves may be seen. Often there occur periodical changes of temperature at the articulation. Brodie has seen the articulation cold and bloodless in the morning become congested and bright-red in the evening. These phenomena of vascular paralysis recur in a manner analogous to the attacks of intermittent fever. Movements of the joint excite congestions of the same character. All these vaso-motor disturbances greatly resemble those which are seen in neuralgias of the third pair, of the brachial or of the ischiatic plexus. Not unseldom there is a peri-articular swelling, attributed by Esmarch to an effusion resulting from internal inflammation, or indeed from more or less ill-timed therapeutics. Sometimes there occurs upon the skin in the vicinity of the joint an eruption very analogous to urticaria. Movements of the joint cause in some cases crackings, of which it is impossible to give any plausible explanation. (Esmarch.)

As to functions, the patients especially complain of a *quasi* paralytic feebleness of the joint, which persists even after amelioration of the pain. Muscular contractions generally immobilize the joint in extension, while in *arthritides* flexion is the rule. The contractions cease under chloroform.

When these neuralgias depend upon hysteria they present the same variability as the other symptoms of this malady, and the most acute pains will disappear as by enchantment when the surgeon diverts the attention of the patient.

A pathognomonic symptom of the disease is the absence of pains during the night, while the pains and contractions of inflammation are then increased. Nevertheless in two patients suffering with neuralgia of the knee and hip the paroxysms of pain occurred especially at night; in another case, neuralgia of the knee, the pains were peculiarly violent when the patient was sitting, but ceased when walking.

Ordinarily the pains disappear slowly, or else there supervene paralyzes and contractions of a different character. The patients do not leave their beds, isolate themselves more and

more, and finally fall into marasmus. Inopportune treatment, want of energy toward the patient are but too often causes facilitating this unfortunate termination. It ought to be added that the disease does not present this history except in the hysterical; in other cases its progress is that common to neuralgias.

The diagnosis of hysteric arthro-neuralgias will be rendered easy by the co-existence of other symptoms of the same character; but often there are great difficulties, especially if there be a traumatism of the articulation. We should not forget that certain articular inflammations are insidious, are accompanied by lesions scarcely perceptible, and Esmarch states that he has frequently mistaken dry caries for articular neuralgia. In such a case the progress of the disease alone could remove the uncertainty. For my own part I attach great importance to the disturbances of sensibility which I have previously indicated. Esmarch adds that we may be guided by the result of treatment, since the means commonly used in inflammation—immobility, antiphlogistics, etc.—will aggravate neuralgia.

It is necessary in the treatment to discriminate as to the cases. If it be one of hysteric arthro-neuralgia, general treatment is of first importance. Divert the patient's attention from the painful joint; combat the chlorosis; be assured of the integrity of the genital organs. In reference to the last point, Sims has reported two interesting cases of coxalgia.* In one of these cases there were granulations of the cervix and leucorrhœa, and the patient had been confined to her bed for years. The granulations were cured, but the patient still had pain and want of power in the left hip-joint. Passing the sound into the uterus, it was ascertained that violent pain was produced in the diseased joint by the instrument when at

*Some years ago Dr. Churchill had a similar case sent him by Dr. Stokes, where the irritation of the hip was reflected from a diseased cervix. Curing the latter removed the former.—T. P.

the internal os. Glycerine injections into the uterus accomplished complete cure after some weeks. The second case was one of endometritis, accompanied with pains seated almost exclusively in the left arm. The introduction of the sound caused the same pains in the hip as in the preceding case.

The local treatment, according to Esmarch, ought to be the least possible. Antiphlogistics and revulsives are injurious, while a rapid amelioration is obtained if the patient is induced to use the painful articulation; commence with passive motion, then active. Sometimes *massage* gives good results. Cold affusions, douching the articulation, followed by frictions, are, in Esmarch's opinion, the best local means. As a general reconstituent he prefers cold sea-baths continued for some time.

If these neuralgias occur in persons otherwise in good health, employ the means usually used in other neuralgias—subcutaneous injections, blisters, and cold applications. In my experience electricity gives favorable results. The application of the faradic brush, or, if the patient can not endure this, passing a galvanic current, are the best electro-therapeutic methods.

In the cases of arthro-neuralgia apparently of spinal origin I have obtained good results from the galvanic current applied the entire length of the spine. Wernher, in his cases of nervous coxalgia, has obtained the best effects from continued extension.

THERAPEUTIC VALUE OF IPECACUANHA ADMINISTERED AS AN INJECTION.—M. Chouppe states that in 1873 Dr. Bourdon first used the decoction of the root of ipecacuanha as an injection per anum in two infants attacked with severe diarrhea. The results were most satisfactory. M. Chouppe was hence induced to try it in the diarrhea of tuberculous patients, and met with equal success. The preparation and dose he has found best are as follows: twenty grammes of bruised

ipecacuan-root are boiled in five hundred grammes of water, divided into three parts, each portion being boiled on the root for ten minutes; the three decoctions are mixed together and boiled down to two hundred and forty grammes, to which are added about ten or twelve drops of laudanum. This is enough for two injections. For infants the dose is proportionately less, and no laudanum is added. Two injections are administered per diem to the patient, the first being given between 7 and 8 A. M.—that is to say, two hours before food; the second about 8 P. M.—that is to say, about three hours after the last meal. Vomiting was never observed. M. Chouppe found that injection of decoction of ipecacuanha into the veins of an animal produced violent vomiting and remarkable *dryness* of the mucous membrane of the intestine. The chief substances taken up by water boiled on the root are emetine and tannin, and both appear to have a powerful influence in checking irritation. The conclusions he arrives at from the review of a number of cases of diarrhea thus treated are: 1. That ipecacuanha administered in the form of injection produces very satisfactory results in the diarrhea of tuberculous patients and in the choleriform diarrhea of young children; 2. By this proceeding the disorders of the stomach frequently caused by ipecacuanha are avoided; 3. Injections per anum can be continued for a long time without producing any trouble of the digestive function nor weakening of the patient; 4. Ipecacuanha under these circumstances seems to act by absorption. (*Bulletin Gén. de Thérapeutique*, June, 1874.)

FINAL EXPERIMENTS ON THE ELIMINATION OF ALCOHOL.—“Looking to the fact,” says Dr. Anstie, in the *Practitioner*, “that Dr. Parkes and myself have from independent (and indeed opposite) quarters come to singularly close agreement as to the daily allowance of alcohol that can be taken without producing any narcotism or other visible disturbance

in the organism, I think I may take it as conceded that quite six hundred grains of absolute alcohol can be disposed of daily within the organism of an adult male without any perceptible injurious effect upon the bodily functions. Now this quantity of alcohol is (theoretically) capable of generating an enormous amount of force; but it is equally certain that that force does not show itself under the form of heat. It is scarcely possible therefore but that the solution of the questions as to the action of alcohol in the body will also bring about the discovery of new physiological facts of great interest and importance.

"1. If alcohol be a force-producing food, as seems by far the most likely, it is probably of great value in that capacity, on account of the rapidity with which its transformations take place. It is, however, abundantly certain that beyond a certain dosage (which is pretty clearly made out for the average, though of course there are individual exceptions in both directions) it becomes a narcotic poison of a very dangerous character in every respect; not the least disadvantage being that it can not be eliminated to any considerable extent.

"2. If alcohol does not disappear by oxidation, it must undergo some as yet quite unknown transformation, after which it must escape unrecognized in the excretions. I have heard various attempts to suggest such modes of disappearance, but nothing so far which wears any air of probability.

"3. If alcohol, however, be indeed oxidized, and yet does not beget force which can be used in the organism, this would be the strangest possible discovery. Considering the very high theoretical force value of the six to eight hundred grains of absolute alcohol which millions of sober persons are taking every day, we may well be hopeless of any reasonable answer to the question, Why does not this large development of wholly useless force within the body produce some violent symptoms of disturbance?"

PROGNOSIS OF SYPHILIS.—Dr. Sturgis, of New York, one of the highest authorities on the subject, writes as follows in the American Journal for July:

1. That syphilis is a self-limited disease, and the patient, if blessed with a sound constitution, will in the average of cases get well, even if left untreated; but this course exposes to great and serious risk.

2. That some general idea may be formed as to the future from the character of the earlier lesions. *This rule, however, is not absolute, as some cases do occur where the early stages are slight and the subsequent ones severe.* They are nevertheless, he thinks, exceptional.

3. That as the disease progresses the prognosis is less favorable, more especially where important organs are attacked, such as those of the nervous or arterial systems.

4. That in forming an opinion due regard must be given to the age and general health of the patient, and in the treatment attention must be paid, besides the proper use of specific remedies, to strengthening the patient, if debilitated from any cause whatsoever.

TREATMENT OF ECZEMA.—Dr. Wiltshire communicates to the Trans. London Obstetrical Society the following very sensible suggestions on this vexed question:

"General Treatment.—When the health is depressed and nutrition has failed strict attention should, in the first place, be paid to diet. Any thing likely to excite urticaria, such as starches and sugars, should be avoided, for the itching and irritation which accompany nettle-rash greatly aggravate eczema. Lime-water with milk is very useful; so are well-made broths and beef-tea. Tonics may be necessary to improve the appetite, and other medicines to improve digestion. Steel-wine and cod-liver-oil are powerful for food, and so, rightly used, is quinine. When there are great restlessness and sleeplessness bromide of potassium is of great service.

Chloral, I fear, is apt to cause itching of the skin in eczematous patients, but it answers sometimes. If oxalate of lime be present in the urine, nitro-muriatic acid and bark are very useful. In some cases syrup of iodide of iron suits well, and may advantageously be alternated with other forms of iron or with the acids. In rickety and badly-nourished children attention to the bowels is well repaid. The old-fashioned rhubarb, soda, and gray powder answer admirably.

"When the general health appears good a different line of practice is called for. Here great attention to diet is necessary, error usually lying in the direction of excess, and especially in the matter of nitrogenized food. Lithates or oxalate of lime in the urine indicate potash or lithia and nitro-muriatic acid. An occasional purge of calomel and jalap, or of sulphur, is very useful. Sometimes nothing answers so well as a combination of one to one and a half grains of calomel with ten grains or more of sulphur precip., and especially if there be bronchial irritation. The exhibition of decoction of hop and *triticum repens* answers admirably in some cases. Now and then opium and belladonna may be required. It is in this class of cases that the preparations of arsenic yield the best results; that is, in cases of long duration, when there appears to be some constitutional vice at the bottom of the matter, and but little evidence of failure of the general health.

"Veiel believes arsenic to be most useful in those skin affections which are accompanied by infiltration of the cutis, such as we have seen occurs in long-standing eczema. When there is any suspicion of a syphilitic taint Donovan's solution is an excellent remedy. In a few cases of eczema cantharides may be successful, but they require very cautious use, and are of restricted application. For my own part I very rarely use them. Here and there a case will yield readily to antimony, which appears to be indicated in well-nourished and firm-fleshed children, whose skins are harsh.

"Local Treatment.—Perhaps for no disease of the skin have so many things been devised for external application as for eczema, and the great value of some of them has led to the belief that they alone suffice for its cure. This is the view of Hebra and others of the Continental schools, but it is one to which I can not subscribe. In my judgment success is best achieved by a judicious combination of both methods, though certainly the results of simply local medication are oftentimes very striking, and occasionally I restrict myself to it.

"Our first aim as regards local treatment is in most cases to soothe. For this purpose I recommend washing with fine almond- or oat-meal and water. Soap, as a rule, is interdicted. Decoction of poppies or marshmallow may sometimes be profitably substituted for water, but the oat-meal should never be cooked. After gentle drying various things may be applied, according to the indications. Thus, if there be much irritation and exudation, dusting with fine oxide of zinc through muslin is very soothing; so is bismuth (the old-fashioned trisnitate). Occasionally the addition of a little tannin to the foregoing or to starch powder is very serviceable. Tannate of glycerine often answers admirably. With many skins greasy things disagree. This may be owing to the decomposition of the fat by the alkaline exudation. Perhaps for all eczematous eruptions nothing equals the white precipitate ointment. It is in my experience an admirable remedy. I think it suits best when the white precipitate is added to benzoated zinc ointment. I have never seen any ill results follow its use, even when applied for prolonged periods. The preparations of tar are at times of striking use; probably they are most useful in chronic cases accompanied by much thickening of the skin. Lotions containing lead will often give satisfaction. They may be combined with morphia or hydrocyanic acid, though usually it is not desirable nor is it necessary to resort to these drugs in chil-

dren's practice. Now and then lotions containing glycerine relieve, but more commonly they cause much pain. This is probably due to the affinity of glycerine for water, which it abstracts from the tissues. Lotions of carbonate of soda or borax are frequently useful, and a little wine of opium goes well with them. In limited but sharp eczemas a curd made by adding liq. plumbi to milk often relieves. So will calomel ointment when the eruption is around the anus. When the hands or eyelids are attacked citrine ointment is useful. Glycerine of tannin, already mentioned, in some cases acts like a charm, and may be well applied by means of a camel's-hair pencil. It is sometimes necessary to muffle the hands of young children who suffer with eczema of the face, since by their scratching they greatly aggravate and keep up the disease.

"It can not be doubted that sometimes the recession of eczema is followed by bronchitis, and mothers are occasionally fearful of bad consequences from the cure of the skin-affection. In such cases considerable care is requisite, and any tendency to chest complication should, if possible, be warded off by bringing into play another set of emunctories; *e. g.*, those of the intestine. It is in cases of this description that antimony is very useful. It is well at the same time to give frequent doses of aperients if the antimony does not act as such; and I have been best pleased with the sulphur and calomel purge, ten grains or more of the former and one or more of the latter."

The same writer, in regard to the *Treatment of Impetigo*, says: "No disease of the skin yields more gratifying results than this. The first thing to be aimed at is the improvement of the general health; and as the patients are usually the subjects of scrofulosis, and not unfrequently rickety, this is best accomplished by improving the diet, by change of air, and by the exhibition of cod-liver oil and steel-wine. Quinine is also extremely useful in this disease. It can readily be

added to vinum ferri. Now and then the syrup of iodide of iron suits well, and especially if there be otorrhœa. Attention should also be paid to the bowels.

"Locally, as a rule, it is best not to attempt to remove the crusts by poulticing, etc. They will soon come off under appropriate treatment, and no time is lost or pain caused by attempts at their premature removal. The application of an ointment consisting of ten, fifteen, or twenty grains of white precipitate to an ounce of zinc ointment is attended by brilliant results. The effect of this ointment is very striking. It should be applied twice or even thrice a day. The scalp should always be searched and the hair cut off from and around all suspicious spots.

"The skin may be cleansed by oat- or almond-meal and water, made of the consistence of thin cream without boiling. No danger need be apprehended from the white precipitate. In many hundreds of cases I have never seen any evil results or sign of absorption follow; on the contrary, its use has been attended by the most gratifying results. This preparation of mercury is not readily absorbed from the skin, and besides, its use is rarely required for more than a very short time. Occasionally, and especially in the presence of pediculi and their nits, the use of an ointment composed of equal parts of white precipitate and sulphur ointment is preferable and answers well."

INTERCOSTAL NEURALGIA IN WOMEN.—Dr. M. Fothergill remarks that this is a very well-marked form of neuralgic disease, and is very common. It belongs to the reproductive period of women's existence, is troublesome and intractable, and almost always associated with leucorrhœa, amenorrhœa, or menorrhagia, or it occurs in women who are suckling. The treatment he recommends is a combination of stimulants and tonics, especially carbonate of ammonia, with the ammonio-citrate of iron in an infusion of quassia. After a

short time this may be advantageously changed for sulphate of quinine, muriate of iron, and quassia. In other cases Dr. Ferrier's plan of administering gentian and rhubarb mixture may be adopted, especially when symptoms of gastric derangement are found. Belladonna plasters and mustard plasters may also be applied over the tender parts which usually correspond with the origin of the sixth intercostal nerve. Special attention should be paid to the leucorrhœa, and cold baths, spongings, or injections ordered. Menorrhagia should receive suitable treatment, and suckling discontinued. (The Obstetrical Journal.)

TREATMENT OF SEBACEOUS TUMORS OF THE SCALP.—Mr. Tyrrell, in concluding a paper (Dublin Journal of Medical Science) on the surgery of the head, says in reference to sebaceous tumors: "1. That those which occur at birth or in early infancy should be removed without delay, as experience proves such tumors have a tendency to cause destruction of the bone and to perforate the skull; 2. That the ordinary sebaceous tumors of the hairy scalp do not cause absorption of the bone; 3. That when a sebaceous cyst ulcerates a spontaneous cure is not to be expected; 4. That when a sebaceous cyst ulcerates it should be entirely removed as soon as possible; 5. That the ordinary sebaceous tumors may remain harmless for an indefinite time, and do not necessarily grow larger from day to day; 6. That the surgeon should not operate on them unless the patient is in good health, and after a careful examination, particularly of the urinary organs; 7. That for removing such tumors the knife is preferable to caustic; 8. That external applications and internal remedies are worse than useless."

CAUSTIC LIME IN THE TREATMENT OF ONYCHIA MALIGNA. Professor Vanzetti, well known on account of the method so strongly advocated by him of the cure of aneurism by digital

compression, proposes a new method for the cure of onychia maligna. He has furnished convincing proofs of the efficacy of this plan in a monograph on the subject recently presented to the R. Istituto Veneto. In this he laid down the principle that the true and chief seat of the disease is situated in and limited to the matrix of the nail. He tried the application of the nitrate of lead recommended by Moerloose, who described twelve cases treated by this means successfully. He thought he could still improve upon this by using some substance which would absorb and dry up the pus, and accordingly tried quicklime upon two patients who presented themselves at the hospital with onychia of the feet. In one the disease had developed spontaneously, in the other as the result of an injury. In one of the patients the lime was left in contact with the affected part without renewal; in the other it was frequently renewed. Both did well, with perfect reproduction of the nail. (*Lo Sperimentale*, Fasc. i, 1874.)

LOCAL TREATMENT OF CYSTITIS IN WOMEN.—Dr. Braxton Hicks (*British Medical Journal*) observes that in speaking of cystitis he means the more severe forms, such as that which, among other causes, arises from the effects of labor-retention, from malignant disease of the organ, or from paralysis, etc. General or constitutional remedies are in such cases of little service, but local treatment proves of great value. The only general treatment that may be used with advantage is opium or some other anodyne, and such corrective as may modify an alkaline state of the urine. Supposing it to be alkaline and ammoniacal, it is best to take a catheter made of gum-elastic, and open at the extremity as well as at the side, and after having well oiled it to pass it gently into the bladder for as short a distance as possible, and withdraw the catheter just as the bladder is on the point of being emptied, which saves the mucous membrane from flapping down on the end. Then with a syringe throw up through

the catheter warm water slightly acidulated with either nitric, hydrochloric, or acetic acid. Vinegar does very well. If nitric or hydrochloric acid, about two drops of the strong acid to the ounce of warm water. As soon as the patient complains of desire to micturate, allow it to flow away again. This should be repeated till the bladder seems clear of the phosphates and mucus. About half a pint of acidulated water will generally suffice. Then inject also through the catheter about one grain of morphia dissolved in about an ounce of water; quickly withdraw the catheter from the urethra, and instruct the patient to retain it as long as possible. It is rare that the single application does not produce great relief. This treatment may be repeated twice daily if the case be very severe.

When the urine has not been markedly alkaline Dr. Hicks simply injects the solution of morphia, or first washes out the bladder with warm water or warm solution of permanganate of potash. After some days of this treatment he sometimes employs, instead of the permanganate of potash, a solution of chlorate of potassa, about three or four grains to the ounce; using plenty, drawing it off after a few minutes according as it gives pain, and then injecting the morphia. Regarding the dose of morphia, he adds that if there be no blood in the urine, and the patient feels no constitutional effects from a grain, he increases it to two grains. If blood appears in the urine, it is a sign of some abrasion, in which case the morphia is more likely to be absorbed; yet he has never seen any unpleasant symptom from two grains. The more that is used without affecting the system much the better, locally subduing the nerve-irritation and the tenesmus of the bladder, and the crushing of the mucous membrane which the contraction produces. As the acute symptoms subside more astringent washes may be employed, such as two or three grains of tannin, or three or four drops of solution of perchloride of iron in the ounce of warm water, using

the morphia solution immediately after. The choice should depend on the amount of pain caused, the object being not to produce more than necessary. If the urethra be very tender, a bougie or catheter covered with tannin, made very smooth, and dipped in gum-water, may be introduced. A probe, on which a film of nitrate of silver has been fused, may be tried, or the surface may be mopped out with a piece of cotton dipped in perchloride of iron. In chronic cases a solution of nitrate of silver containing from five to ten grains to the ounce may be injected, followed by the introduction of two grains of morphia in solution. In the acute stages the warm hip-bath and warm sponge to the genitals are not to be omitted, together with perfect rest in bed. The bowels must be kept gently relaxed, and the diet should be simple and light.

HYDRATE OF CHLORAL IN TRISMUS AND TETANUS OF NEW-BORN CHILDREN.—Dr. A. von Hüttenbrenner has made a trial of chloral hydrate in the above cases, and on the strength of his own experience, added to that of Steiner, Auchenthaler, Monti, etc., thinks he is justified in arriving at the following conclusions: 1. Tetanus is a disease which is not necessarily fatal. 2. The cause of the disease is febrile or not; in the former case it is but a partial manifestation of general poisoning of the blood; in the latter it consists of reflex spasms excited by peripheric irritation. 3. Prognosis is more favorable in cases unattended by fever, though it is not necessarily unfavorable in cases accompanied by fever. 4. Chloral hydrate is far from being a specific for tetanus, but its employment must be recommended because it is a pure hypnotic, which does not determine congestion of the brain as morphia does, is easily administered to children, and finally has been undoubtedly successful in a great many cases. (*Fahrh. d. Kinderheilk.*)

Notes and Queries.

ABERNETHY AND PENNINGTON.—We find the following in Mr. Clarke's Autobiographical Recollections of the Medical Profession: "Pennington and Abernethy were dressers at the same time to the celebrated Percival Pott, and each claimed precedence. Pennington was certain that he was entitled to be first, but for some time, in order to avoid a quarrel, gave way to Abernethy. On one occasion, however, Johnny carried his presumption a little too far. Pott was crossing the quadrangle, followed by the students. He was giving a kind of running 'clinique' on a case in which Pennington was deeply interested, and, anxious to hear all that was said, he stuck close to the teacher. Abernethy came up and absolutely elbowed him out of his position. Pennington then found that it was time to put a stop to his impertinence, particularly as the insult was given in the presence of so many of the fellows. He took no notice of it at the moment, though the circumstance did not escape the observation of Mr. Pott. Immediately on the conclusion of 'the round' Pennington made up his mind to act, and accordingly in the presence of a number of students addressed Abernethy, 'Jack, this won't do; I have given way to you too long, and for the future you must be content to play second fiddle.' Abernethy began to bluster and use strong language. At that time disputes of the kind were settled in a summary way, and Pennington immediately prepared to assert his right by an appeal to the fist. The place of combat was in the corner of the ground which is near the Anatomical Theater, and thither they repaired, followed by anxious and admiring

confères. Pennington took off his coat and prepared for action. Jack did not follow suit; in fact he declined the ordeal of battle, and Pennington was for the future first. They were closely associated for nearly fifty years afterward, but never had an angry word. Dining together some forty years after, in Bedford Row, the old quarrel between them accidentally cropped up. 'Well,' said Abernethy, 'the truth of the case was this: the moment I saw you uncover your biceps I was certain I should be thrashed; and so, my boy, I surrendered at discretion.' "

TO PHYSICIANS.—The following letter has been received from Dr. Hale, of Owensboro, Ky., and will, we hope, elicit the information he seeks:

"*Dear Sir*—I am preparing a report on 'Glioma of the Retina,' to be read before the Kentucky State Medical Society at its annual meeting in April, 1875. I design embracing in said report the observations of the profession in this country so far as they can be obtained. I desire a brief history of each case, the treatment and final result. Any information you may give me on the subject will be thankfully received and embraced in the report.

Respectfully,

J. HALE, M. D.,
Owensboro, Ky.